SECTION I : GENERAL INTRODUCTION

This page intentionally left blank

TABLE OF CONTENTS

TABLE OF FIGURES

1. INTRODUCTION

1.1 DOCUMENT AND WORK OVERVIEW

1.1.1 BACKGROUND AND OBJECTIVES

The main goal of this "Functional Transit System Specification" (FTSS) document is to identify the scope of the New Computerised Transit System (NCTS) and to detail its functional specification. It is also intended to serve as a stable baseline for the NCTS detailed technical specification (see 'Technical Transit System Specification' [TSS-TSP-SYS]) DDNTA.

This document has been built on the basis of the "Functional Scope Document" [XXI/1359/96] (FSD) which describes at a high level the functional specification of the "pure" NCTS. The FTSS document supersedes the FSD by presenting the detailed functional specification of the NCTS in its final situation (i.e. all Customs offices working within the NCTS).

The FTSS document has been developed with a very structured and well proven methodology that supports the specification of NCTS from the perspective of analysing changes in the business process and data domains.

In the Business process domain, process flow diagrams and business processes (EBP) description are the models or work products that will be used to support the understanding and description of the business activities.

The State Transition Diagrams (STD), structure of the information to be exchanged and business rules lists will be the models to cover the Data domain.

All these models are presented in the "Definitions" and "Symbolism used in the various models" parts of this document.

Useful documents to be read before or in parallel to this one include:

- "Basic Principles of NCTS" [XXI/2128/95 Rev. 2];

- "User Needs Specification" (UNS) which describes the various NCTS users and their identified needs [XXI/880/96 Rev. 1], procedural, organisational and location requirements and any constraints on the design and implementation of the NCTS;

- "Glossary of Terms" [XXI/1622/95 Rev. 4] which provides many definitions of words used in this document.

1.1.2 GENERAL APPROACH

The detailed functional specification of the pure NCTS has been realised by further detailing business areas, process threads and process steps previously identified in the FSD document.

The business areas and process threads are those described in the FSD document, while the process steps have been decomposed into elementary business processes in order to guarantee that they can be performed by <u>one person</u>, at <u>one location</u> and <u>one time</u>.

Most of the process steps already met these criteria for EBP. Conversion from process steps into EBPs was only a matter of identification. The other process steps have been simply suppressed and replaced by their decomposition into several elementary business processes, which can be either fully manual, or fully automated, or some combination of the two.

The full business process documentation of this document will contain for each process thread within business areas (Core Business, Guarantee Management, Central Services and System Administration), a diagram showing the process flow, completed by textual description of the process flow components: events launching or triggering the process thread, elementary business processes and their results. The textual description will include reference to the organisation(s) responsible to perform the processes and to the location(s) where they are performed. The diagrams only show the location(s).

This documentation will also be enriched by indicating the reference to information to be exchanged between processes, when these exchanges involve processes performed at different locations.

The structure of the information to be exchanged will be fully supported by the data definition of the logical data model.

State Transition Diagrams, representing the life cycle of data, will also be provided with the process threads which intensively manipulate the Transit Operation data, i.e. the process threads of Office of Departure, Destination and Transit.

This document identifies all processes involved in the scope of the full NCTS. The specification of what will be automated and what be manual processing in NCTS will be described in the Scope documents.

1.1.3 STRUCTURE OF THE DOCUMENT

This document contains several sections and appendices.

SECTION I : GENERAL INTRODUCTION includes the following chapters:

- Chapter 1 describes the overview of the document and work, and provides important definitions as well as lists of abbreviations, acronyms and references;

- Chapter 2 presents the general assumptions on which the document has been built;

- Chapter 3 describes the symbolism used in the various models included in this document;

- Chapter 4 provides a general overview of the NCTS.

SECTIONS II, III, IV and V present the Transit process threads corresponding to the various activities which will be performed in the NCTS. Each section deals with one of the four major Transit business areas that have been analysed:

- *Core business*, dealing with the main Transit activities performed at Office of Departure, Office of Transit, Office of Destination or at Trader's premises;

- *Guarantee management*, covering the activities related to guarantee, wherever they take place;

- *Central services*, including the management of reference databases and the provision of common services to the various NCTS users;

- *System administration*, providing services needed to administer an IT system such as the NCTS.

Each section contains:

- a detailed description of the various process flows involved in the "pure" NCTS;

- a "p.m" reference to the transitional period and

- an index of the process threads and EBPs defined in the section.

SECTION VI - FUNCTIONAL SECURITY RULES
This document does not contain Section VI anymore.

SECTION VII - DATA MODEL
This document does not contain Section VII anymore.

SECTION VIII - TRANSIT TEST APPLICATION FUNCTIONS
This document does not contain Section VIII anymore.

SECTION IX - EXCEPTION HANDLING describes the solutions required to cope with the cases where NCTS cannot or has not been used as expected. It contains the following chapters:

- Chapter 1 introduces the need for an exception handling analysis, defines concepts and explains the approach followed;

- Chapter 2 presents the different generic responses to exceptions;

- Chapter 3 analyses the exceptions related to the information interchanges;

- Chapter 4 presents the different specific responses to exceptions;

- Chapter 5 explains how to rectify the information entered by mistake into NCTS.

APPENDIX A0 - SYMBOLISM
This document does not contain Appendix A0 anymore.

APPENDIX A1 - ENTITY RELATIONSHIP DIAGRAMS
This document does not contain Appendix A1 anymore.

APPENDIX A2 - ENTITY DEFINITION REPORT
This document does not contain Appendix A2 anymore.

APPENDIX A3 - PROCEDURAL CODES & STRUCTURE OF REFERENCE NUMBER provides the procedural codes used in NCTS and relates on the structure of the reference

numbers used to identify a given Customs Office (COR), Movement (MRN), Guarantee (GRN), Commodity Code (COM) and Sensitive Good (SGI).

APPENDIX A4 - LIST OF SYNONYMS USED IN APPENDIX B
This document does not contain Appendix A4 anymore.

APPENDIX B - LOGICAL DATA MODEL / FUNCTIONAL STRUCTURE OF INFORMATION TO BE EXCHANGED describes the contents of the information to be exchanged, based on the functional requirements of the computerised transit system and taking into account the needs of the users. This description includes logical subdivision of the message in sub-structures, cardinality or condition of presence of each sub-structure, format and condition of the presence of fields in each sub-structure, rules between fields and business rules applicable to the information exchange.

APPENDIX C0 - USER NEEDS / PROCESSES TRACEABILITY MATRIX
This document does not contain Appendix C0 anymore.

APPENDIX C1 - CRUD MATRICES BETWEEN EBP's AND ENTITIES
This document does not contain Appendix C1 anymore.

APPENDIX D - DETAILED LIST OF EXCEPTIONS contains the detailed list of all the individual exceptions identified during this analysis, and a short description of the related business response.

1.1.4 INTENDED READERSHIP

The intended readership for this document includes:

- any person responsible for the functional and technical specification or implementation of the NCTS;

- any person responsible for the definition of tests for the NCTS;

- any other authorised body concerned with the NCTS including: EC/EFTA Joint Committee on Common Transit, the Steering Committee, OLAF, Traders Associations.

1.2 DEFINITIONS

Reference is made to the "Glossary of Terms" [XXI/1662/95] and "User Needs Specification" [TSS-CSA-UNS] where most of the terms used in this document are defined.

Only the definitions which are not already provided in those documents are presented below.

1.2.1 METHODOLOGY RELATED DEFINITIONS

Many definitions related to methodology, especially in the domain of Business process, are already provided in the referenced documents.

The table below lists additional definitions for terms related to the models of this document and for which the symbolism is explained in Heading 3.

Name	Description
Attribute	An attribute is a data element in which information is to be exchanged (IE).
Data group	A Data group is a set of data containing one ore more attributes.
Event	An event is an occurrence that triggers the Business to respond to a predictable fashion. It may occur outside, but is important to the business process. The two categories of events are internal event (event that occurs within a process thread. It may result from the completion of another process, the meeting of a certain condition, or the arrival of a particular point in time) or external event (event that occurs outside the process thread).
Location	A location is the place where the business is performed.
Organisation	An organisation is a number of individuals acting in concerned way towards a common business purpose with allocated roles and responsibilities.
Result	A result is an outcome of the business response to an event. A result can be an external result (result that goes beyond the business area to affect its environment) and internal result (result that goes outside the process thread but will stay in the business area). A result can be major, if it is main response of a process thread to an event, or minor if it occurs in addition to the major result.

1.2.2 BUSINESS RELATED DEFINITIONS

Two of these additional definitions have special importance in the way to document the business activities in the process flow diagram and process description. They are the definitions covering the organisation and location concepts.

The following headings provide additional information on these concepts, together with an exhaustive list of organisations and locations used to describe the business activities.

1.2.2.1 ORGANISATIONS

As stated in the table of definitions, an organisation is a number of individuals acting in a concerned way towards a common purpose with allocated roles and responsibilities.

Within NCTS, we identify the internal organisations that have part of the responsibility on the performance of the NCTS and the external organisations that only provide information to the NCTS. The table below gives the list of the organisations involved in the NCTS, completed with the list of Users, defined in Heading 2. "User Characteristics" of the UNS, who belong to the organisations:

Organisation	Internal/ external	Description	End Users
National Customs Administration	internal	National Customs Administration of a country participating in the NCTS project.	• Customs Officers; • Data Manager for the National Domain; • System Administrator for National Domain.
DG TAXUD	internal	Organisation responsible for the Transit Computerisation Project.	• Customs Officers; • Data Manager for the Common Domain; • System Administrator for Common Domain.
Trader	external	Generic term for the Economic Operators who interact with the Transit procedures.	• Principal; • Authorised consignor; • Authorised Consignee.

Organisation	Internal/ external	Description	End Users
Guarantor	external	The financial organisation, for example a bank, which provides surety for a guarantee.	• Guarantor.

1.2.2.2 LOCATIONS

Location is the place where the business is performed.

Locations are not defined as geographic fixed points but more as places where a set of processes is performed for a specific Transit Operation or maintenance of reference data.

The table below gives the exhaustive list of the locations this document refers to:

Actual Office of Destination	The customs office where goods placed under the Transit procedure have been presented in order to complete the Transit operation.
Common Domain Central Services Office	Central Services Office is used as location in several events, processes and results of central services and system administration business areas. The Common Domain Central Services Office is responsible for: • the management of Transit data at common level; • the services and utilities required to administer and support the NCTS at common level.
Declared Office of Destination	The Customs Office where goods placed under the Transit procedure would have been presented to complete the Transit operation, as planned in the declaration. Actual and declared Office of Destination are the same except in case of diversion. So when diversion is not in the scope of the process thread they can be simply called 'Office of Destination'.
Declared Office of Transit	The Customs Office, as it is declared, at the point of entry into a Contracting Party other than the Contracting Party of departure, AND/OR The Customs Office, as it is declared, at the point of exit from a Contracting Party when the consignment is leaving the customs territory of that Contracting Party in the course of a Transit operation via a frontier between a Contracting Party and a third country.
Higher Authority of a Customs Office	The Higher Authority refers to the higher authority Customs Office, i.e. the Customs Office to which the current one refers in the national Customs Offices hierarchy.
National Domain Central Services Office	Central Services Office is used as location in several events, processes and results of central services and system administration business areas. The National Domain Central Services Office is responsible for: - the management of Transit data at national level; - the services and utilities required to administer and support the NCTS in the National Administration. Such an Office will be required in each country participating in the NCTS. It may be centralised or decentralised, depending on the National Administration organisation.
Office for Guarantee Waiver	The Office where a competent authority grants the guarantee waivers.
Office of Departure	The Customs Office where a Transit operation begins.
Office of Guarantee	The Office where comprehensive guarantees data, flat-rate guarantees and associated NCTS vouchers data, and guarantee waiver data are recorded.
Office of Recovery	The Office responsible for the management of recovery procedures.
Office of Transit	The Customs Office at the point of entry into a Contracting Party other than the Contracting Party of departure, AND/OR

	The Customs Office at the point of exit from a Contracting Party when the consignment is leaving the customs territory of that Contracting Party in the course of a Transit operation via a frontier between a Contracting Party and a third country.
OLAF	European Anti-Fraud Office
Premises of the Trader at Destination	Office of the Trader where the Transit consignment is received and where the Transit Movement ended.
Premises of the Guarantor	Office of person or financial organisation which provides surety for a guarantee.
Premises of the Trader at Departure	Office of the Trader where a Transit Movement is initiated.

1.3 ACRONYMS

The following acronyms are used in this document.

Acronyms	Description
AAR	Anticipated Arrival Record
AEO	Authorised Economic Operator
AES	Automated Export System
AIS	Automated Import System
ATIS	Anti-Fraud Transit Information System (OLAF)
ATR	Anticipated Transit Record
CAU	Competent Customs Authority
CDTA	Centrally Developed Transit Applications
CN8	Combined Nomenclature 8 (first 8 digits of commodity code)
COL	Customs Office List (in French: Liste des bureaux de douane)
COR	Customs Office Reference number
COTS	Commercial Off-The-Shelf Software
CRN	Certificate Reference Number
CRUD	Create – Read – Update – Delete
CTP	Conformance Test Protocol
DTI	Direct Trader Input
EAD	Export Accompanying Document
EBP	Elementary Business Process
EC	European Community
ECS	Export Control System
EORI	Economic Operator Registration and Information System
EFTA	European Free Trade Association
FSD	Functional Scope Document
FTSS	Functional Transit System Specification
GRN	Guarantee Reference Number
HS6	Harmonised System 6 (first 6 digits of commodity code)
ICS	Import Control System
ISO	International Standard Organisation
IT	Information Technology

LRN	Local Reference Number
MASP	Multi Annual Strategic Plan
MRN	Movement Reference Number
N/A	Not applicable
NA	National Administration
NCF	Notification of Crossing Frontier
NCTS	New Computerised Transit System
NTA	National Transit Application
OP	Office of Publication
OTS	Old Transit System
RCOL	Re-engineering of the Customs Office List
SAD	Single Administrative Document
SPEED	Single Portal for Exit and Entry Data
STD	State Transition Diagram
TAD	Transit Accompanying Document
TAN	Transit Advice Note
TCP	Transit Computerisation Project
TIN	Trader Identification Number
TTSS	Technical Transit System Specification
OLAF	Office Européenne de la Lutte Anti-Fraude, European Anti-Fraud Office
UNS	User Needs Specification

1.4 REFERENCES

Reference	Title	Version	Date
Transit Manual	The Transit Manual	TAXUD/1953/2003 – EN rev 8 final	18 September 2006
Convention	DECISION No 2/2007 OF THE EC-EFTA JOINT COMMITTEE ON COMMON TRANSIT of […] amending the Convention of 20 May 1987 on a common transit procedure	TAXUD/1642/2006 EN - final	16 April 2007
Modernised Customs Code	Implementing the Community Lisbon programme Proposal for a REGULATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL laying down the Community Customs Code (Modernized Customs Code)	2005/0246 (COD) COM(2005) 608 final	18 June 2007
Implementing Provisions	• COMMISSION REGULATION (EC) No …/.. of […] amending Commission Regulation (EEC) No 2454/93 of 2 July 1993 laying down provisions for the implementation of	TAXUD/1647/2006 EN - final	• 16 April 2007 • *OJ L 139 , 02/06/2005 P. 0001 - 0* • *OJ L 300,*

	Council Regulation (EEC) No 2913/92 establishing the Community Customs Code […] • Council Regulation (EC) No 837/2005 of 23 May 2005 amending Commission Regulation (EEC) No 2454/93 laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code • Commission Regulation (EC) No 1875/2005 of 16 November 2005 amending the representative prices and additional duties for the import of certain products in the sugar sector fixed by Regulation (EC) No 1011/2005 for the 2005/2006 marketing year		*17.11.2005, p. 43–44 (ES, CS, DA, DE, ET, EL, EN, FR, IT, LV, LT, HU, NL, PL, PT, SK, SL, FI, SV)* *002*
ISBN 92-826-8695-7/COL	List of authorised Customs Offices for Community/common Transit operations, original source of the current "Customs office List" published on the TAXUD website on EUROPA		1994
DGXXI/2128/95 (TSS-BAS)	TCP: Basic Principles of NCTS	2.00	4/7/96
DGXXI/880/96 (TSS-CSA-UNS)	User needs specification	2.04	8/7/96
DGXXI/0070/97-EN (TSS-SEC-POL)	Security Policy Document	3.04-EN	23/01/98
DGXXI/1622/95 (TSS-PQP-GLO)	Glossary of Terms	4.00 –EN	03/06/97
DGXXI/1359/96 (TSS-CSA-FSD)	Functional Scope Document	1.04	11/07/96
TCP_EXT_DBR	Feasibility Study Reference Databases Extension	2.00 –EN	28/04/95
Security amendment	Regulation (EC) No 648/2005 of the European Parliament and of the Council of 13 April 2005 amending the Customs Code	OL 117/13	04/05/05
	Commission Regulation (EC) No 1875/2006 of 18 December 2006 amending the Implementing provisions	OL 360/92	19/12/06

AEO	• Reg 1875 Corrigendum to Commission Regulation (EC) No 1875/2006 of 18 December 2006 amending Regulation (EEC) No 2454/93 laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code • TAXUD/1421/2007 final-EN	OJ L 360,	• 19/12/2006 • 14/02/2008
TIR	TAXUD/1427/2005 rev2		06/06/2005
AD and SM	FTSS Corrigendum 1/2006		26/07/2006
New Enquiry & Recovery Procedure	• TAXUD/1647/2006 final (IP) Draft COMMISSION REGULATION (EC) No …/..of […]amending Commission Regulation (EEC) No 2454/93 of 2 July 1993 laying down provisions for the implementation of Council Regulation (EEC) No 2913/92 establishing the Community Customs Code […] • TAXUD/1642/2006 final final (Convention) Draft DECISION No 2/2007 OF THE EC-EFTA JOINT COMMITTEE ON COMMON TRANSITof […]amending the Convention of 20 May 1987 on a common transit procedure		16/04/2007

1.5 CHANGES IN THE LEGISLATION

The new computerised transit system has required the adaptation of the existing legal provisions to satisfy, in particular, the new procedural and legal certainty needs.

The very first provisions have been integrated in the existing legal framework trough the adoption of:
• at European Community level for Community transit:
  Commission Regulation (EC) No. 502 of 12 February 1999 amending Regulation (EEC) No. 2454/93 laying down provisions for the implementation of Council regulation (EEC) No. 2913/92 establishing the Community Customs Code;
• at conventional level for the Common Transit Procedure:
  Decision No 1/99 of the EC/EFTA Joint Committee on common transit of 12 February 1999 amending Appendices I, II and III of the Convention of 20 May 1987 on a common transit procedure.
Further provisions were subsequently adopted during the full development of the project.

2. ASSUMPTIONS

The following general assumptions have been made in writing this document:

1. The NCTS will only deal with the Community/Common Transit procedure and will not consider any specificity for countries not signatory to the Common Transit Convention at the time of writing.

2. Functionality is not bound by the current Transit legislation. The impact of the NCTS on the legislation will be studied by the DG TAXUD's legal team who will be responsible for the required legislative amendments.

3. All Customs offices in a Customs administration are supposed to be able to access any data stored in that Customs administration, subject to National Administration profiles for access for offices and individuals, even if that data was initially dedicated to a specific Customs Office. In order to illustrate this assumption, two examples are given here under:

   - The information to be exchanged IE01 Anticipated Arrival Record (AAR) (which is identified in the process thread CO1B "Process Departure - Release") is an information provided by an Office of Departure to the declared Office of Destination. The assumption makes that information (IE01) available to Offices of Destination other than the one declared, providing those Offices belong to the same Customs administration as the declared Office of Destination.

   - The management of authorisations to use simplified procedure, given to the Trader, is under the responsibility of the organisation "National Customs Administration" at the location "National Domain Central Services Office" (see Section IV, under Heading 1.6 - CS2B "Authorise Trader For Simplified Procedure - Part I"). The assumption makes that information available to all Offices of Departure and Offices of Destination provided that those Offices belong to the same Customs administration as the Central service. With this assumption, the Office of Departure is able to verify that the Trader who submits a declaration under simplified procedure is authorised to do so. For the same reason, the Office of Destination is able to verify that the Trader who notifies an arrival under simplified procedure is authorised to do so.

4. All assumptions, constraints and remarks expressed in Sections II 'Business process threads for core business', III 'Business process threads for guarantee management', IV 'Business process threads for Central services' and V 'Business process threads for system administration' of this document are understood and valid.

5. Migration OTS-data to NCTS (e.g. in case of accession of new contracting parties) : The loading of "National Domain" data used in OTS into NCTS databases will be the responsibility of the different National Administrations. No supplementary functionality will be foreseen in NCTS for this migration.

6. NCTS data will be kept on-line for a specified time to allow link with external systems i.e. other national computerised customs procedures. Only one process is foreseen, at destination, to present this data to these external systems.

7. IT connections with Traders (in the external domain) include EDI and DTI, and in specific circumstances, the use of magnetic media. When the Trader provides information to Customs by means of magnetic media, Customs will not respond via this media.

8. Authorised Consignees/Consignors require electronic connections (EDI/DTI).

9. Wherever human intervention is involved, no response time can be guaranteed by NCTS. If response time is critical and no response is received in a pre-defined delay, default actions will have to be defined. E.g. Authorised Consignees should be informed about the Customs Officer's decision to control the goods after the reception of unloading remarks in a very short delay. Therefore, a reminder should be sent by NCTS to the Customs Officer if his decision is not provided after a pre-defined delay. For these process steps where human intervention is involved, without defined rules, NCTS does not guarantee response time.

3. SYMBOLISM USED IN THE VARIOUS MODELS

This document contains models which support the description of the business processes (Business process model view) and the description of data that NCTS will manipulate and store (Data model view).

We provide here the list of the models belonging to the Business process model view, for which we will also provide in the following headings details on the symbolism used:

1. A diagram providing a graphical representation of the Transit business thread. This diagram is called a **process flow diagram**. It shows how the business arranges its processes to respond to external events (e.g.: E_Transit consignment arrives at destination) and to produce results (e.g.: R_Presentation rejected at destination). This specific technique allows for full understanding of the Transit business before detailing the information technology solution supporting those processes. Many businesses have similar processes, but the arrangement of the processes—the *dynamics* or process flow—may be very different.

2. Textual description of the components of the Transit business thread and shown on the process flow diagram:

  - the (major and minor) **events** that launch the thread;

  - the **processes** (EBPs) that are involved in the thread;

  - the (major and minor) **results** produced by the thread.

3. When applicable, specific assumptions, constraints or remarks will be provided for each of the elements[1].

The Data model view will be limited to the following two models:

1. The model of the **State Transition Diagram** presents the life cycle of the data, showing the different states and the way it goes from one state to the next one. State Transition Diagrams are provided for the most significant process threads. Their symbolism is described in Heading 3.3.

2. During the execution of the Transit business threads, information is exchanged between processes. The **Structure of the information to be exchanged** is provided, together with its symbolism, in Appendix B of this document.

---

[1] For guarantee management, these are general or dependent on a particular guarantee type rather than related to a specific business thread; they are thus expressed for the business area as a whole rather than detailed by Transit business thread.

3.1 SPECIFIC REPRESENTATIONS INSIDE A PROCESS FLOW DIAGRAM

The following diagram is an example of a process flow diagram which represents the arrival of a Transit Movement at the office of destination, and the handling of the diversion in case the actual office of destination is not the one which has been declared at departure:
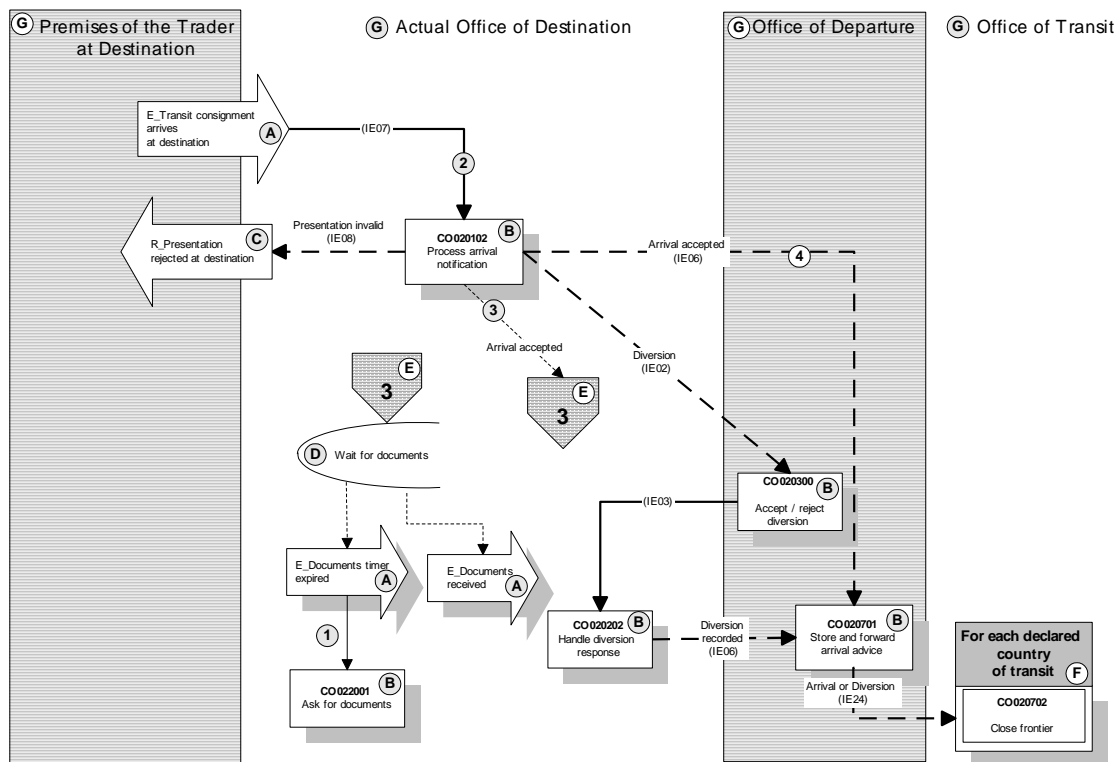
Figure 1: Example of a Process Flow Diagram

Process flows are composed of two major elements:

- the components of the process flow, indicated by an alphabetic enumeration:
    - (A): Event;
    - (B): Process (EBP);
    - (C): Result;
    - (D): Process flow break;
    - (E): Process flow connector;
    - (F): Iteration;
    - (G): Location.
- the flow between those components, indicated by a numeric enumeration:
    - (1): Mandatory flow within a location;
    - (2): Mandatory flow between locations;
    - (3): Optional flow within a location;

- ④ : Optional flow between locations.

3.1.1 THE COMPONENTS OF THE PROCESS FLOW

The following headings provide detail on the components of the process flows diagrams.

3.1.1.1 EVENT

An *event* Ⓐ is an occurrence that triggers the business to respond in a predictable fashion. An *event* causes a sequence of processes to start or to restart after a process flow break, e.g. "E_Transit consignment arrives at destination".

The *event* is represented as a large arrow pointing from left to right and is drawn in the column of the location(s) where it happens.

Each *event* name starts with an E_ followed by the name.

For example:
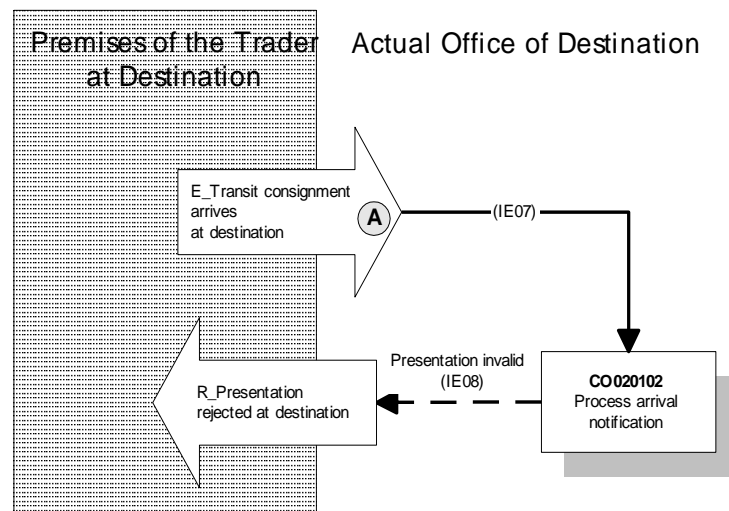
Figure 2: Example of an Event

An event that can happen at different locations is represented on the diagram as one event overlapping the different location columns where it can happen, e.g. the event "E_Transit consignment arrives at destination" can happen at the 'Premises of the Trader at Destination' or[2] at the 'Actual Office of Destination'.

3.1.1.2 PROCESS (EBP)

An *elementary business process* Ⓑ, also called *process* in the document, is represented as rectangle containing its identification and its name.

---

[2] It must be noted that, for a given Transit operation, the event occurs at only one location. But considering another Transit operation, the event can occur at the other location. So, the 'OR' must be interpreted as an exclusive OR.

For example:

Actual Office of Destination
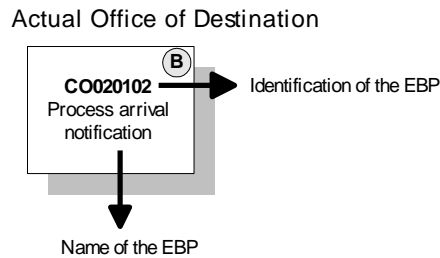
Figure 3: Example of an EBP

Each *EBP* is identified by a string of the format 'xxttssss' where:

- 'xx' identifies the business area, which can be:

    - CO: Core business;

    - GU: Guarantee management;

    - CS: Central services;

    - SA: System administration.

- 'tt' identifies the process thread in that business area (e.g. CO02 - "Process arrival");

- 'ssss' identifies the EBP in the process thread (e.g. CO020102 - "Process arrival notification").

The *EBP* name is composed by a verb followed by a complement (e.g.: Process arrival notification).
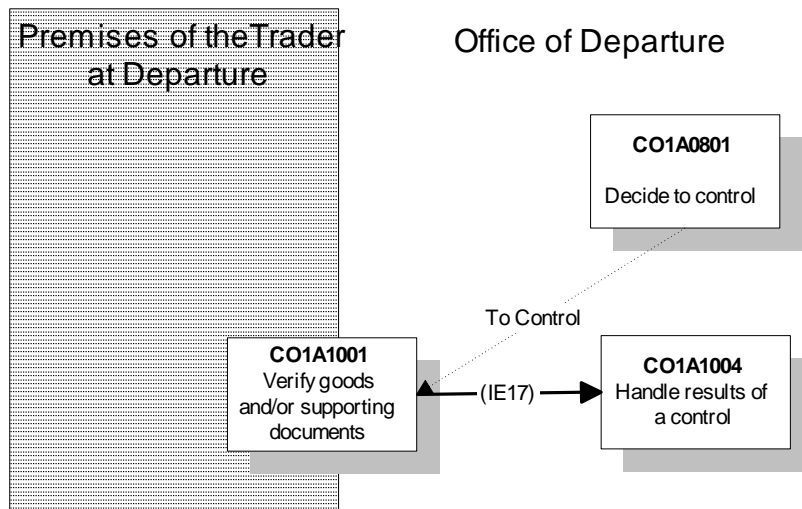
Figure 4: Example of an EBP performed at different locations

A process that can be performed at different locations is represented on the diagram as one process overlapping the different location columns where it can be processed, e.g. the process CO1A1001 - "Verify goods and/or supporting documents" can be performed either at the 'Premises of the Trader at Destination' or[3] at the 'Office of Departure'.

---

[3] It must be noted that, for a given Transit operation, the process occurs at only one location (exclusive OR).
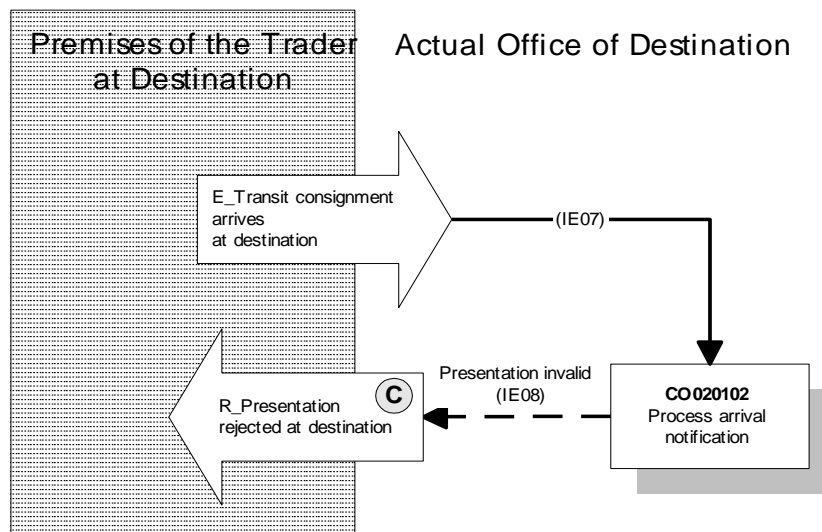
3.1.1.3 RESULT

A *result* Ⓒ is a business product put at the disposal of other processes, e.g. "R_Presentation rejected at destination".

The *result* is represented as a large arrow pointing from right to left and is drawn in the column of the location(s) where the result will be used.

The *result* name starts with R_ followed by the name.

For example:

Figure 5: Example of a Result

A result that can be used at different locations is represented on the diagram as one result overlapping the different location columns where it can be used, e.g. the result "R_Presentation rejected at destination" can be used at the 'Premises of the Trader at Destination' or[4] at the 'Actual Office of Destination'.
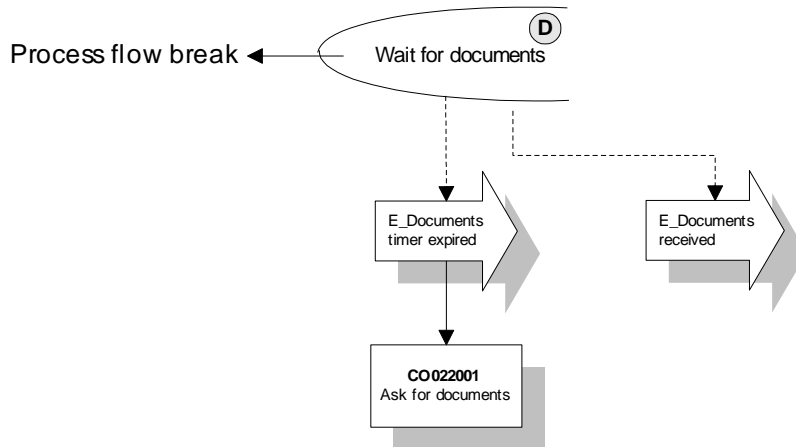
3.1.1.4 PROCESS FLOW BREAK

A *process flow break* Ⓓ occurs when one process in the flow is complete, but the next process cannot start before an event occurs to restart the process flow.

When the time interval allowed for the break has elapsed, an internal event (see definition under Heading 3.1.1.1 'Event') is created (in the given example 'E_Document Timer expired') and used as a trigger for the next process. If some condition occurs during the time interval that allows no longer waiting for its end, another internal event is created (in the given example 'E_Document received') and used as a trigger for the next process.

The process flow break is represented as a large "U" on its side. It is followed by the events that will cause the process flow to restart.

---

[4] It must be noted that, for a given Transit operation, the result occurs at only one location (exclusive OR).

For example:

**Figure 6: Example of a Process Flow Break**

3.1.1.5 FLOW CONNECTOR

A *flow connector* (E) is used to clarify the diagram when the next component in the process flow is too far from the previous one. It must be related to process belonging to the same business process thread.

The *flow connector* is represented as a small house on its roof. It is labelled with a number and both components (the previous one and the next one) are in the same diagram, maybe on different pages.

For example:
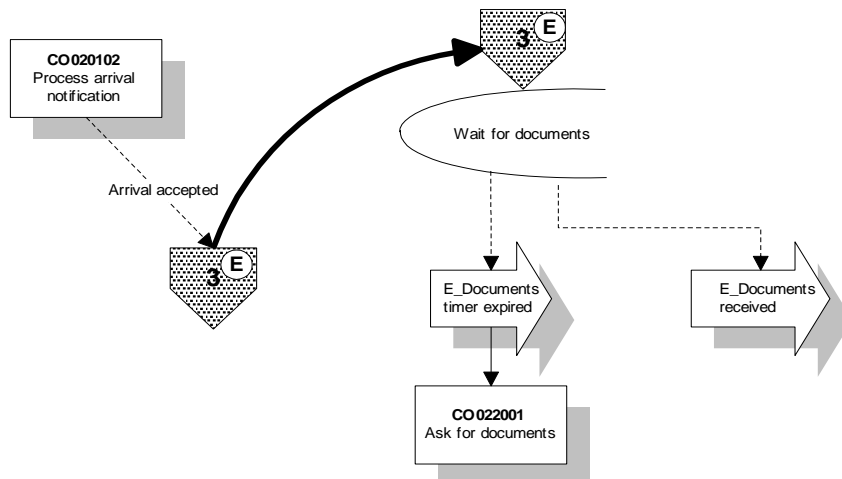
Figure 7: Example of a flow connector

3.1.1.6 ITERATION

An *Iteration* (F) describes the case where sequences of processes need to be repeated a number of times, as if in a loop.

The loop may continue a predictable number of times (in this case the statement specifying the number of iterations will start with the word 'For'), or it may continue an unpredictable number of times until some expected verifiable condition is satisfied (starting with the word 'Until').
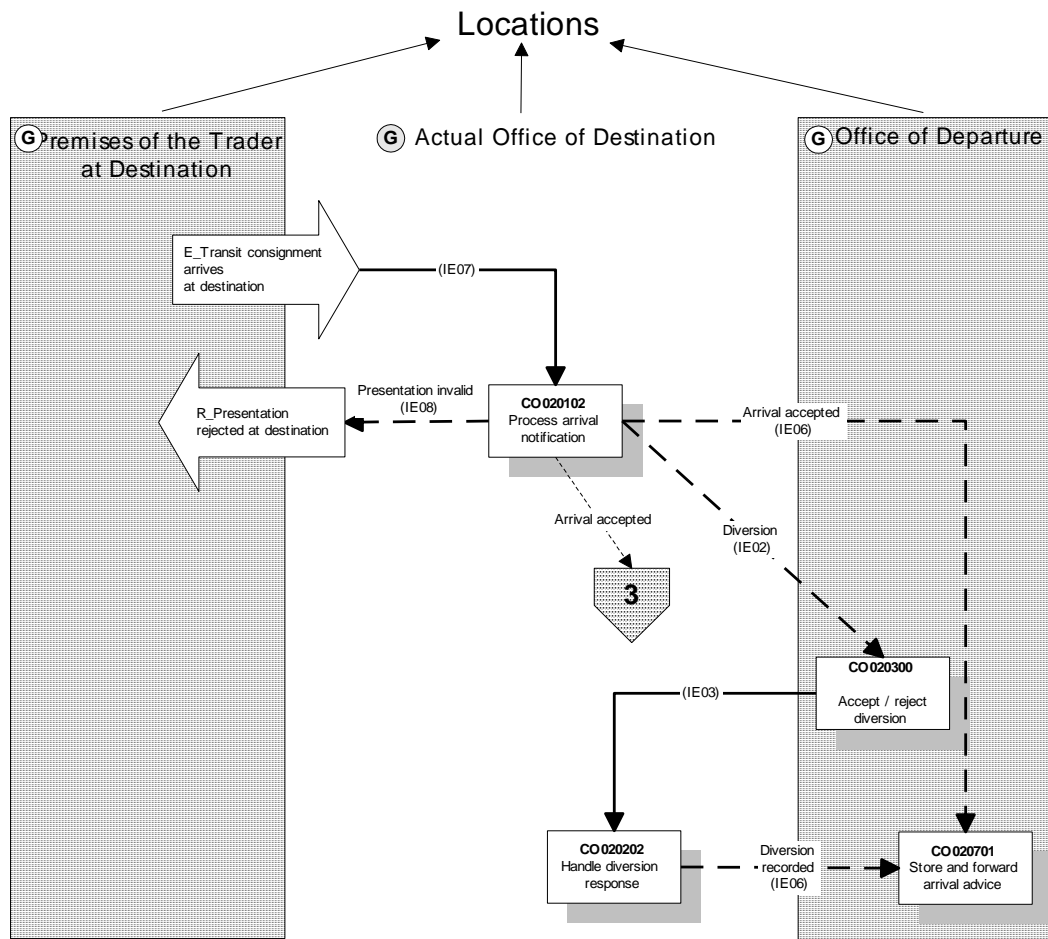
For example:
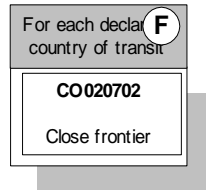
Figure 8: Example of Iteration

3.1.1.7 LOCATION

The process flow diagrams indicate also in background the locations where the processes are executed. Processes are put in the column, or across the columns, whose title identifies the *location* Ⓖ where it is executed.

For example:

Figure 9: Example of Locations

The above diagram shows that the EBP CO020102 "Process arrival notification" is performed at the location of the "Actual Office of Destination". This process includes, when the arrival is accepted the sending of an information (IE06) to the location of the "Office of Departure".


Upon reception of that information, the EBP CO020701 "Store and forward arrival advice" is performed at the location of the "Office of Departure".

3.1.2 FLOWS BETWEEN THE COMPONENTS

The *flows* are represented using a line terminated with an arrowhead which starts from one component and leads to another component of the process flow.

1. A mandatory flow within the same location ① is represented by a narrow solid line; in this context, 'mandatory' means that the succession of the component is imposed (in the example, the EBP CO020701 "Store and forward arrival advice" always produces the result 'R_Office of Departure notified of arrival (or diversion)').

2. A mandatory flow between different locations ② is represented by a wide solid line. This flow between locations is always labelled with an identifier of the information to be exchanged in the form IExx[5].

3. An optional flow within the same location ③ is represented by a narrow dashed line; in this context, 'optional' means that the succession of the component depends on a certain condition. So, this flow is always labelled with the name of the condition.

4. An optional flow between different locations ④ is represented by a wide dashed line and is always labelled with the name of the condition (because the flow is optional) and the identifier of the Information to be Exchanged.

For example:
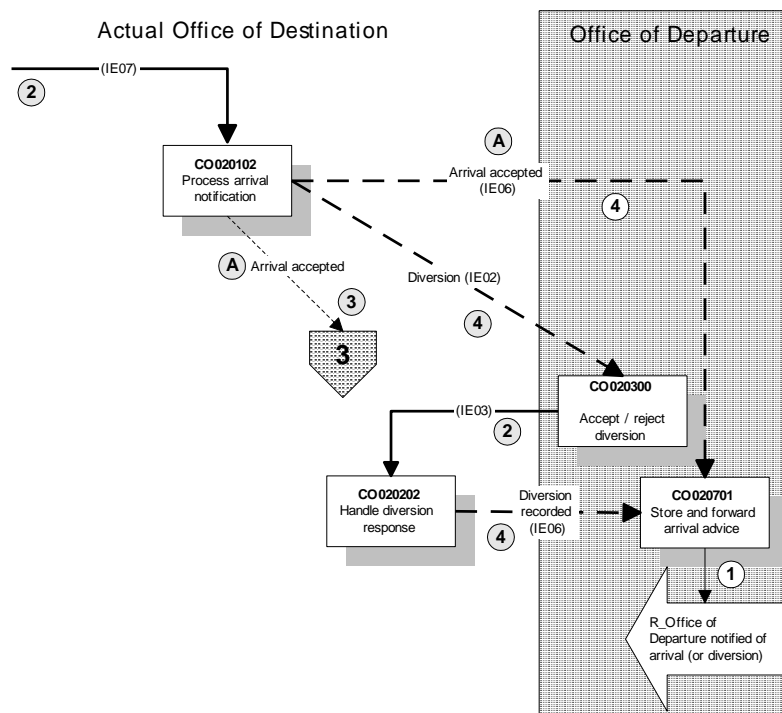
Figure 10: Example of simultaneous flows

---

[5] 'IE' means Information to be Exchanged and 'xx' is a sequential number which univocally identifies the information to be exchanged.

It must be noted that, depending on the circumstances encountered by an EBP, the latter can produce different sets of flows. As explained above, each optional flow is labelled with the name of a condition. When two or more flows leaving one process are labelled with exactly the same name of condition meaning that they are produced simultaneously (see condition "Arrival accepted" Ⓐ).

An Information to be Exchanged (IE) represents the flow of information between two EBPs taking place in different locations. No assumption is made on the communication medium used to carry out this flow of information. The content and structure of all IEs are detailed in Appendix B 'Logical Data Model / Functional Structure of Information To Be Exchanged'. The following remarks apply to all IEs:

1. all IEs are supposed to comply with the structure, the conditions and the rules defined in appendix B 'Logical Data Model / Functional Structure of Information To Be Exchanged'. This compliance is always checked on the reception side of the IE. In case of non-compliance, the IE is rejected, an advice of non-acknowledgement (NACK) is returned to the sender, the process flow is interrupted, and exception handling measures must be taken (this is further developed in Chapter 3 'Information Interchanges' of section IX 'Exception Handling');

2. an IE may contain some free text written in the language of the originator.

3.1.3 SPECIFIC NOTATION FOR TRANSITIONAL ASPECTS

This document does not contain section 3.1.3 (including sub-sections 3.1.3.1 and 3.1.3.2) plus **Figure 11** anymore.

3.2 EXAMPLES OF TEXTUAL DESCRIPTION

Textual description is provided for the following components of a Transit business thread:

- events;

- process or EBP, in the context of the pure NCTS;

-

-

- results.

3.2.1 EVENT

E_Transit consignment arrives at destination ①
Organisation : Trader or National Customs Administration ②
Location : Premises of the Trader at Destination or Office of Destination ③
④The consignment has reached its destination.   The consignment may either be at the Office of Destination or in some other place called the 'goods place' which will be specified to the Office of Destination. If the consignment is under the responsibility of an

Authorised Consignee, the goods lay in the goods place.

Each event is described by:

- ① its name;

- ② who produces it (Organisation);

- ③ where it happens (Location);

- ④ its description.

3.2.2 PROCESS PURE NCTS

Process arrival notification ①	Process: CO020102 ②
Organisation : National Customs Administration ③	
Location : Office of Destination ④	
Constraint : ⑤ On reception of an arrival notification under simplified procedure, the Office of Destination has to respond within the pre-defined time period defined in the authorisation of Authorised Consignee.	
Description : ⑥ When an arrival notification (IE07) ⑦ is presented under simplified procedure (IE07.CTL_CONTROL.Simplified procedure flag is present), NCTS checks that the Trader who communicates the arrival (IE07.TRADER.TIN) is indeed authorised (Authorised Consignee) to use simplified procedure at that office of destination and checks that the location where the consignment can be controlled (IE07.TRANSIT OPERATION. Arrival location of goods authorised) is against the various authorised places specified in the authorisation. When an arrival notification (IE07) is presented under normal procedure (IE07.CTL_CONTROL.Simplified procedure flag is absent), then the location where the consignment can be controlled is either: • at the Office of Destination, when both IE07.TRANSIT OPERATION. Agreed location of goods and IE07.TRANSIT.OPERATION.Customs sub place are absent; • at an agreed location of goods, when IE07.TRANSIT OPERATION. Agreed location of goods is present and acceptable by the Customs Office; • at a Customs sub place, when IE07.TRANSIT OPERATION. Customs sub place is present; in this case NCTS checks it against the various Customs sub places acceptable for the Office of Destination. When the arrival is invalid, NCTS rejects the arrival notification and notifies (IE08) the Trader that the presentation is invalid with the reason of the rejection (see dashed line labelled "Presentation invalid") ⑧. When the arrival is valid, NCTS looks for the movement information referenced by the MRN brought in the arrival notification (IE07.TRANSIT OPERATION.MRN). If the movement information is not available either in case of international diversion or in exceptional situations, NCTS asks (IE02) that information to the Customs administration of Departure which can be deduced from the MRN (see dashed lines labelled "Diversion"). ...	
Final situation : ⑨ If the arrival notification is not valid then it is rejected; If there is international diversion or a prohibited national diversion, the Office of Destination awaits the information from the Office of Departure; In the other cases, the arrival is accepted and recorded into NCTS; the Customs administration of Departure is notified of the arrival.	

Each process is described by:

- ① its name;

- ② its identification[6];

- ③ who performs it (Organisation);

- ④ where it is performed (Location);

- ⑤ which constraints are associated with it (blank when no constraints exists) ;

- ⑥ what it does, the description of the process;

- ⑦ which is the information to be exchanged between two locations;

- ⑧ which are the conditions encountered by the EBP; represented by a text (see dashed line "Condition") pointing to the condition with the same name in the process flow or in the state transition diagram;

- ⑨ in which final situation it leaves the system (this final situation is not meant to duplicate what is said in the description of what the process does but only mentions the most relevant information).

3.2.3 UPDATED PROCESS (TRANSITIONAL IMPACT)

This document does not contain section 3.2.3 anymore.

3.2.4 NEW PROCESS (TRANSITIONAL IMPACT)

This document does not contain section 3.2.4 anymore.

3.2.5 RESULT

R_ Presentation rejected at destination ①
Organisation : National Customs Administration ②
Location: Premises of the Trader at Destination or Actual Office of Destination ③
The Trader is notified of the fact that the presentation is not valid. ④

The model contains a description of the results, who uses them (Organisation) and where they are used (Location)[7].

Each result is described by:

- ① its name;

---

[6] See under Heading 3.1.1.2 'Process (EBP)'

[7] The purpose of a **result** (major or minor) and a **final situation** (being part of the textual description of the process) is quite different. Starting from a unique event, the flow of processes up to the completion of the thread will depend on the conditions met by each executed process, this flow defining a path. While a path is gone through, each executed process leaves the system in a stable situation which is described under the **final situation** and one or more **results** (major or minor) are produced in order to describe what the business has provided in the different encountered circumstances.

- ② who uses it (Organisation);
- ③ where it is used (Location);
- ④ its description.

3.3 STATE TRANSITION DIAGRAMS CAN BE FOUND IN THE DDNTA

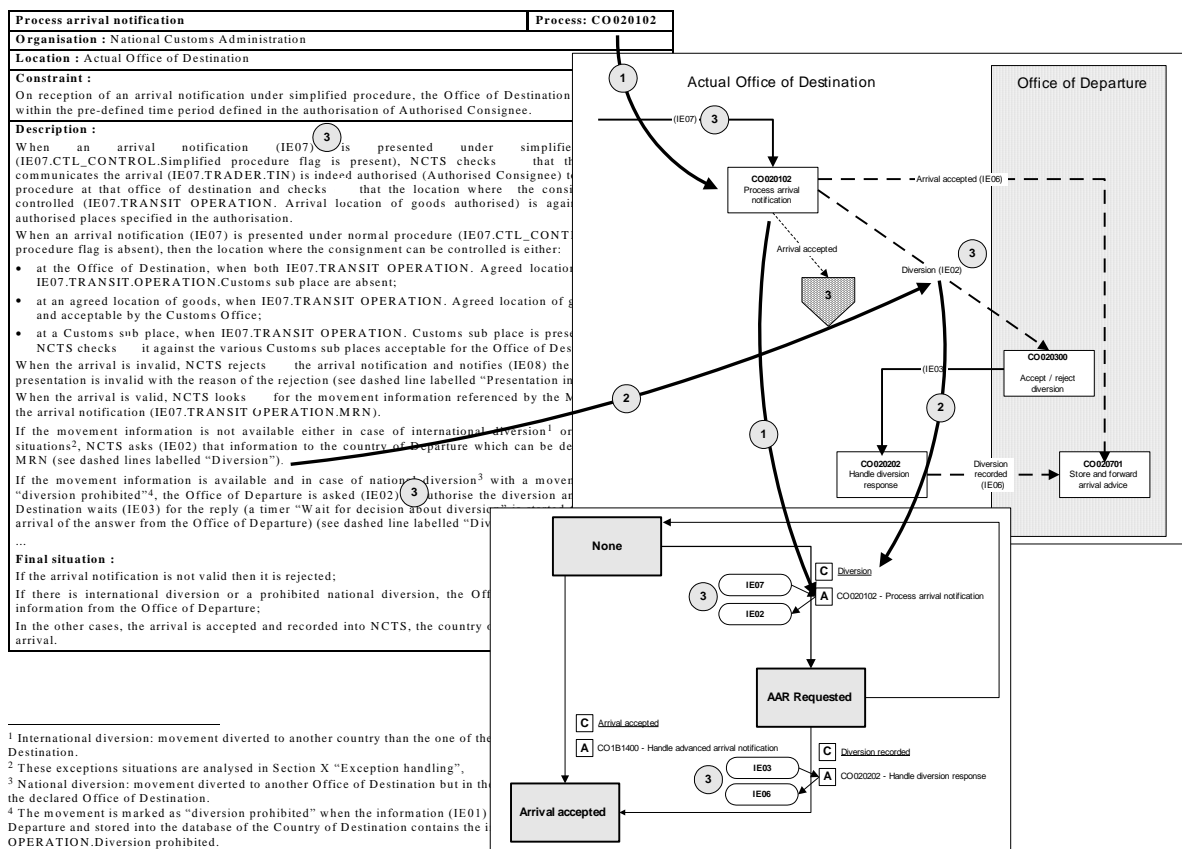# 3.4 TRACEABILITY BETWEEN THE DIFFERENT MODELS

Figure 11: Traceability between models

① and ② Processes (i.e. CO020102) and conditions (i.e. Diversion) are labelled exactly the same in each of the different models.

③ Information to be exchanged are identified with the letters 'IE' followed by the numeric identifier, which identifier points to the information to be exchanged listed in Appendix B.

4. GENERAL SYSTEM OVERVIEW

As previously indicated in the introduction of this document, four Transit business areas have been identified: core business, guarantee management, Central services and system administration.

The general overview is given by three diagrams describing at high level and summarising the role of the various business areas in the NCTS:

- a first diagram describing information exchanged for core business and highlighting interactions between the various locations involved in the core Transit business;

- a second diagram describing the information exchanged for guarantee management and highlighting interactions between the various locations involved in the management of Transit guarantees;

- a third diagram describing the information exchanged for central service management and highlighting interactions between the various locations involved in the management of reference data.

The details corresponding to these high level diagrams will be provided in Sections II 'Business process threads for core business', III 'Business process threads for guarantee management', IV 'Business process threads for central services' and V 'Business process threads for system administration'.
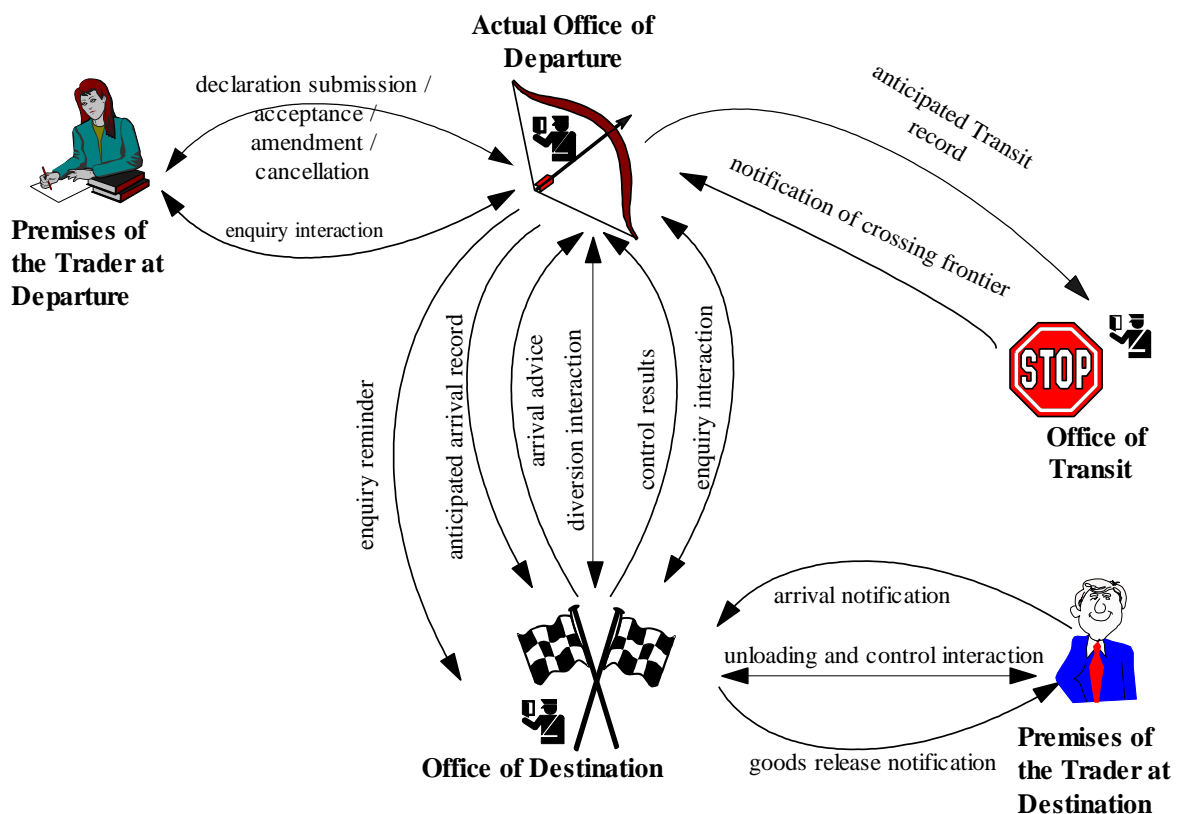
Figure 12: Information Exchanged for Core Business
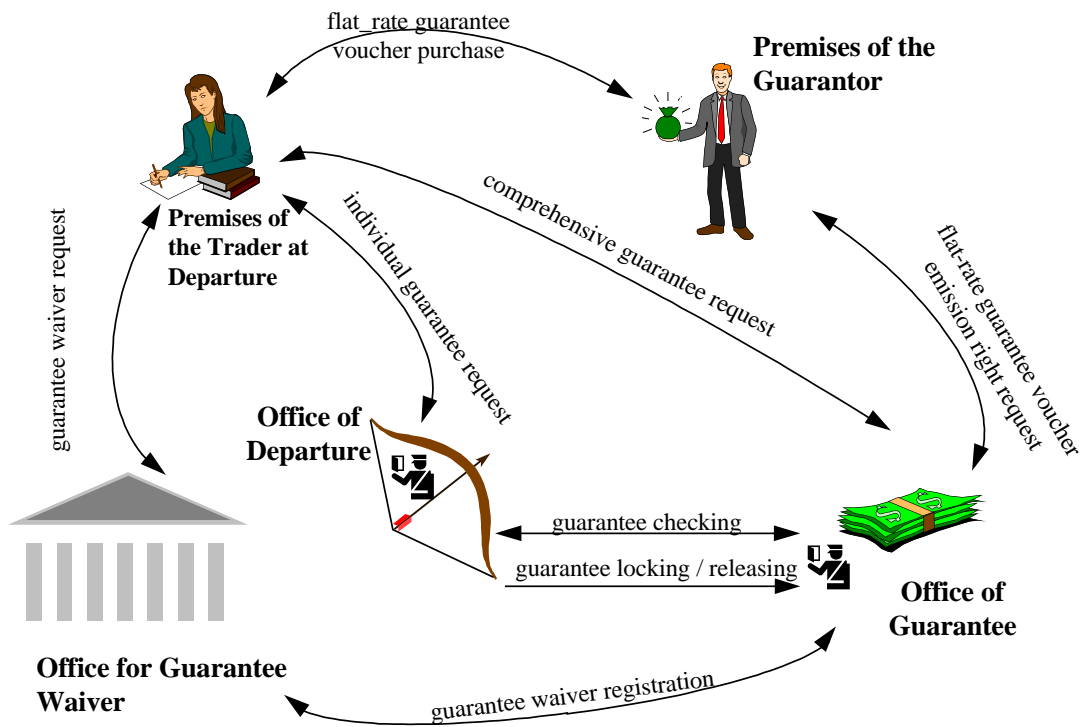
Figure 13: Information Exchanged for Guarantee Management
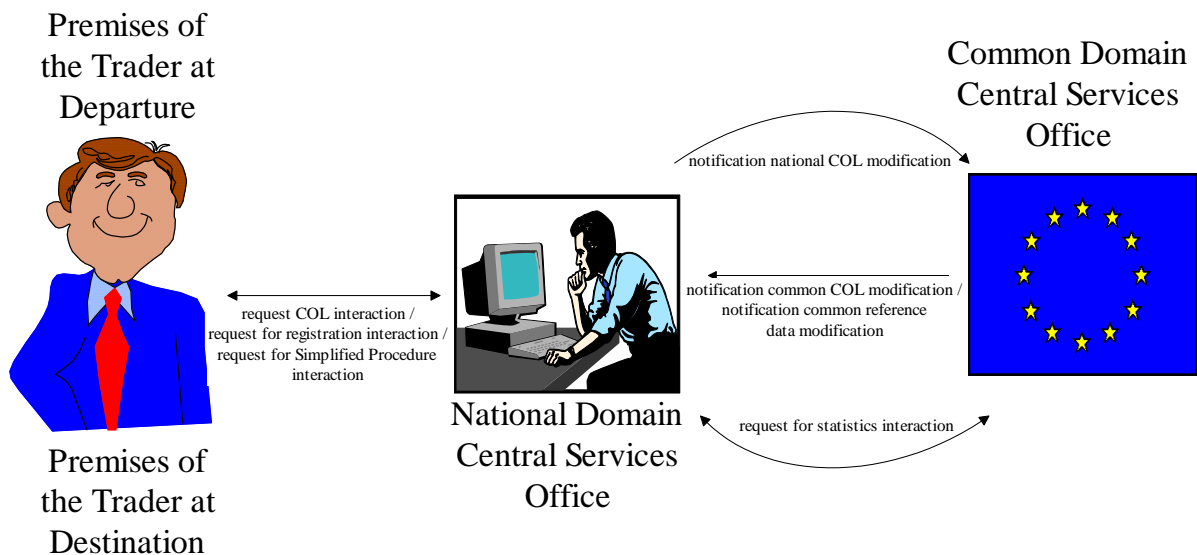
Figure 14: Information Exchanged for Central Service Management